

REMARKS

Claim 2 has been canceled and the limitations have been included in Claim 1.

In Claims 3 and 8, a minor typographical error has been corrected. No new matter has been added. Claims 1-8 are active in this application.

Applicants respectfully request reconsideration of the application, in view of the following remarks.

The present invention as set forth in **amended Claim 1** relates to a process for controlled radical homopolymerization, in an aqueous solution, of acrylic acid and its salts, or of copolymerization, in aqueous solution, of acrylic acid with one or more hydrosoluble monomers, wherein said process is in batch or semi-batch mode, and wherein said process comprises two stages, the first of which is synthesizing “in situ” an hydrosoluble transfer agent used in the second stage of polymerization;

wherein the reactive media of the first stage of synthesis of the transfer agent and of the second stage of polymerization are identical and solely water.

In contrast, none of Chieffair et al and Egraz et al disclose or suggest synthesizing “in situ” of the hydrosoluble transfer agent.

The phrase “in situ” is defined at page 5, lines 20-23 of the specification: “This “in situ” synthesis of the catalyser means that it does not to have to be handled as such, even if it can be advantageous to remove the residue from the synthesis of the transfer agent which is potassium or sodium bromide.”

Further, Chieffair et al (WO 99/31144) is discussed in the specification at page 2, lines 23-38: “Other documents (**WO 99/31144**; WO 00/75207; WO 01/27176; WO01/42312; WO 02/08307; WO 02/22688) require the use of a reactive medium for synthesis of the transfer agent other than water. These transfer agents synthesised in a solvent medium other than

water do not allow acrylic acid to be polymerised in the same reactive medium as that which allowed synthesis of the transfer agent.”

The Examiner refers to page 7, lines 23-25, page 26 lines 20-22, examples page 34-64 of Chieffair et al. However, those passages only mentions the batch and the semi batch modes of the process.

Further, none of Chieffair et al and Egraz et al disclose or suggest to use only water as a reaction medium in the first and second stage.

Applicants wish to draw the Examiner’s attention to the fact that all the recited passages in page 4, 2nd paragraph of the Office Action of September 19, 2007, **DO NOT MENTION WATER AS THE SOLE SOLVENT** but, at the contrary, **ARE DISCLOSING THE USE OF ORGANIC SOLVENTS :**

- in procedure 1, page 35, the solvent is absolute ethanol (see line 31) water being added for the solvent extraction (lines 31-33) after the synthesis (see "the resulting mixture was stirred 3 hours", see line 32),
- at page 36 line 10, the solvent is dimethyl sulfoxide (DMSO) for the synthesis (see "the mixture was allowed to stir during 5 hours"), water being added for the extraction (lines 13-14) after the synthesis,
- ethanol is used in example 10 (the synthesis operates during "16 hours" see line 13),
- in example 11, water is first used ("mixture is stirred for 15 minutes" lines 25-26) but phenyl thiochloroformate (line 26) is added for the longest period of the synthesis ("the solution is stirred for 2 hours", see line 27).

These data are clearly attesting that chain transfer agents according to WO'144 are manufactured in the presence of **organic solvents** and not water as the sole solvent

Further, contrary to the Examiner's statement, the chain transfer agents of Chiefair et al are **not water soluble**.

Chiefair et al uses additional solvent (procedure I, example 1 : methanol - procedure I example 2 : dimethyl sulfoxide - etc...). Indeed, Chiefair et al need a solvent because the chain transfer agents of Chiefair et al are not water soluble.

Contrary to the Examiner's statement, the chain transfer agents of Chiefair et al are not substantially identical to the claimed invention.

The chain transfer agents according to the present invention are hydrosoluble, and the chain transfer agents of Chiefair et al are not water soluble. One of the challenges of the present invention was to find a process (in situ synthesis of the chain transfer agent + synthesis of the final polymer) in aqueous solution: it was not obvious to find a chain transfer agent which was hydrosoluble on one hand, and being able to control the polymerization of acrylic acid in water on other hand.

Egraz et al was only cited to show polymerization of ethylenically unsaturated monomers in aqueous solution. Thus, Egraz et al does not cure the defects of Chiefair et al.

Therefore, the rejection of Claims 1-8 under 35 U.S.C. § 103(a) over Chiefair et al and Egraz et al is believed to be unsustainable as the present invention is neither anticipated nor obvious and withdrawal of this rejection is respectfully requested.

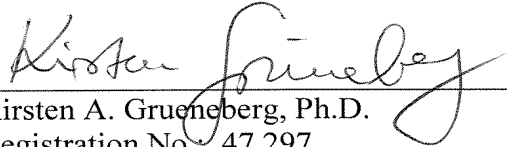
The objection to Table 1 at page 18 of the specification is traversed. The Table as originally filed is **not empty**. This appears to be a scanning error at the Patent Office. A copy of Page 18 as originally filed is enclosed herewith. Thus, the objection should be withdrawn.

This application presents allowable subject matter, and the Examiner is kindly requested to pass it to issue. Should the Examiner have any questions regarding the claims or otherwise wish to discuss this case, he is kindly invited to contact Applicants' below-signed representative, who would be happy to provide any assistance deemed necessary in speeding this application to allowance.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.
Norman F. Oblon

Customer Number
22850


Kirsten A. Grueneberg, Ph.D.
Registration No.: 47,297